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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FOX, BRYAN J	

ART UNIT	PAPER NUMBER
2686	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/836,988	OLMSTEAD ET AL.	
	Examiner	Art Unit	
	Bryan J Fox	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 25* is/are rejected.

7)☒ Claim(s) *24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-14, 16-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (US005890063A) in view of Ahrens (US005848144A).

Regarding claim 1, Mills discloses a system to transport signals to a mobile station ported from one HLR to another HLR where mobile subscribers relocate from a first service area served by a first HLR to a second service area served by a second HLR (see column 1, lines 39-42), which reads on the claimed "migrating subscribers from a first network to a second network". The system transfers an IAM from another network, or incoming signal (see column 8, lines 9-10) from the GMSC 80 a in a first network to the GMSC 80 b in a second network (see column 8, lines 34-41), which reads on the claimed "transferring at least one connection from at least one other network to a gateway mobile switching center of the second network" and "directing a call from the at least one other network to a subscriber of the subscribers at the first network to the gateway mobile switching center of the second network". Mills fails to

expressly disclose that the first network employs a different technology than the second network.

Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two networks must use different technologies, which reads on the claimed "the second network employs a network technology different than a network technology employed by the first".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above networks using different technologies disclosed by Ahrens in order to provide more compatibility among systems.

Regarding claim 2, the combination of Mills and Ahrens discloses that the GMSC requests the routing information for a call from the HLR and reroutes the call to the MSC called for by the HLR (see Mills column 1, lines 27-38), which reads on the claimed "querying, by the gateway mobile switching center of the second network, a home location register of the second network, for routing information for the call".

Regarding claim 3, the combination of Mills and Ahrens discloses a system where the GMSC queries one HLR and if the mobile station has been ported to another network the HLR returns routing information for the second HLR which corresponds to the ported mobile station and routs the call to the MSC of the second network (see Mills column 2, lines 62-67 and column 3, lines 1-7), which reads on the claimed "when routing information for the call is not available at the home location register of the second network, routing the call to the first network".

Regarding claim 4, the combination of Mills and Ahrens discloses that if an incoming signal is received by the original network that is intended for the new network, the new network address is returned to the GMSC (see Mills column 2, lines 62-67 and column 3, lines 1-4). By returning the new network address to the GMSC, the original network is informing the GMSC that routing information is not available in its network.

Regarding claim 5, the combination of Mills and Ahrens discloses that in general, a network analyzes the MSIDN to determine the HLR associated with the mobile station dialed, retrieves the routing information from the HLR and routes the call to that mobile station (see Mills column 1, lines 27-28), which reads on the claimed "when routing information for the call is available at the home location register of the second network, routing the call to the second network".

Regarding claim 6, the combination of Mills and Ahrens discloses that when a mobile station 30 is ported from one network to another, a signal with the new network address data is sent to the HLR of the original network notifying it that the station has been ported to a new network (see Mills column 7, lines 40-66), which reads on the claimed "sending, to a home location register of the first network, a message notifying the first network that a subscriber associated with the call is active on the second network".

Regarding claim 7, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23). Mills fails to disclose that the first network is a TDMA network. The examiner takes official notice that a TDMA network is known in the art. Therefore, it would have been obvious to one of ordinary

skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Regarding claim 8, the combination of Mills and Ahrens discloses that pre-existing subscriber agreements with the first HLR is terminated and a new subscriber agreement is established with the second HLR (see Mills column 1, lines 42-45), which reads on the claimed "registering subscribers from the first network at a home location register of the second network".

Regarding claim 9, the combination of Mills and Ahrens discloses that upon porting a station, the pre-existing subscriber agreement with the original network must be terminated (see column 1, lines 39-54). The combination of Mills and Ahrens fails to teach that the first network would be decommissioned when all the subscribers from the first network are registered at the second network. It would have been obvious to one skilled in the art at the time of the invention to decommission the first network if all stations were ported and therefore all subscriber agreements terminated in order reduce operating costs such as power consumption and maintenance.

Regarding claims 10 and 16, Mills discloses a system where a call, which may originate from any network, is directed to a subscriber at another network (see Mills column 1, lines 26-29 and figure 2), which reads on the claimed "receiving, at the second network, a call directed to the subscriber, wherein the call originated at a third network". The system retrieves routing information from the HLR to connect the call (see Mills column 1, lines 29-36), which reads on the claimed "querying a home location

register of the second network to obtain routing information for the call". Mills fails to expressly disclose that the first network employs a different technology than the second network.

Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two networks must use different technologies, which reads on the claimed "porting a subscriber from a first network to a second network, wherein the second network employs a network technology different than a network technology employed by the first network".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above networks using different technologies disclosed by Ahrens in order to provide more compatibility among systems.

Regarding claims 11 and 17, the combination of Mills and Ahrens discloses a system where the GMSC queries the HLR of the original network and if the mobile station has been ported to another network the HLR returns routing information for the second HLR which corresponds to the ported mobile station and routs the call to the MSC of the second network (see Mills column 2, lines 62-67 and column 3, lines 1-7), which reads on the claimed "when routing information for the call is not available at the home location register of the second network, routing the call to the first network" and must include a router to do the same, as claimed.

Regarding claims 12 and 19, the combination of Mills and Ahrens discloses that in general, a network analyzes the MSIDN to determine the HLR associated with the

mobile station dialed, retrieves the routing information form the HLR and routes the call to the MSC serving that mobile station (see Mills column 1, lines 27-38), which reads on the claimed "when routing information for the call is available at the home location register of the second network, routing the call to the second network" in claim 12 and also "a router arranged and constructed to route the call to the second network when routing information for the call is available at the home location register of the second network" in claim 19.

Regarding claims 13 and 21, the combination of Mills and Ahrens discloses that the GMSC receives the call and retrieves routing information from the HLR (see Mills column 2, lines 62-67) and also routes the call (see Mills column 3, lines 1-6).

Regarding claim 14 the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23). The combination of Mills and Ahrens fails to disclose that the first network is a TDMA network. The examiner takes official notice that a TDMA network is known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of Mills in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Regarding claim 18, the combination of Mills and Ahrens discloses a system where the GMSC queries the HLR of the original network and if the mobile station has been ported to another network the HLR returns routing information for the second HLR which corresponds to the ported mobile station and routes the call to the MSC of the second network (see Mills column 2, lines 62-67 and column 3, lines 1-7), which reads

on the claimed "router arranged and constructed to route the call to a gateway mobiles switching center of the first network when routing information for the call is not available at the home location register of the second network".

Regarding claim 20, the combination of Mills and Ahrens discloses a system that routes the call to one of the networks based on the routing information retrieved from the HLR for the call (see Mills column 4, lines 3-16).

Regarding claim 25, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23), which reads on the claimed "network technology of the first network comprises one of...a global system for mobile communication network technology". Mills fails to disclose that the second network is a TDMA network. The examiner takes official notice that a TDMA network is known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Claims 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills in view of Ahrens as applied to claim 10 above, and further in view of Gallagher et al. (US005933784A).

Regarding claim 15, the combination of Mills and Ahrens fails to teach the use of a dual-mode home location record.

Gallagher et al. discloses the use of a dual-mode HLR (see column 2, line 35).

It would have been obvious to one skilled in the art at the time of the invention to modify Mills with Gallagher to include the above dual-mode HLR in order to enable communications between two incompatible systems.

Regarding claim 22, the combination of Mills and Ahrens fails to teach the step of constructing the second network. Mills focuses on porting a subscriber from one network to another (see Mills column 2, lines 52-57). However, since a subscriber is ported to the second network including both an HLR and a GMSC (see Mills figure 6), It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the second network and add the GMSC and HLR to the second network so that the second network functions properly.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills in view of Ahrens as applied to claim 1 above, and further in view of Kallioniemi et al. (US006064887A).

Regarding claim 23, the combination of Mills and Ahrens fails to teach the updating of routing tables.

Kallioniemi et al. discloses a system for porting numbers and that after a mobile subscriber changes services and keeps the same MSISDN, the routing tables for any intermediate STP would need to be updated (see column 2, lines 44-50).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Mills and Ahrens to include the above updating of routing tables disclosed by Kallioniemi et al. in order to route phone calls and establish connections properly between users in the new network.

Allowable Subject Matter

Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 24 would be allowable because the prior art applied fails to disclose a method of migrating subscribers from a first network to a second network of a different technology where the routing tables of a third network are updated by provisioning one or more of the routing table of the third network to direct calls to the GMSC of the second network and connections between the third network and the GMSC of the first network are removed.

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is.(703) 305-0997. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-9802.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

BJF

Nguyen V0
4-19-2004

NGUYEN T. VO
PRIMARY EXAMINER